

**Remarks/Arguments:**

**Amendments**

Claims 1 and 20 have been amended to introduce the limitations of claims 2 and 21, respectively. Claims 2, 15, 21-24, and 33 have been canceled. Claims 3, 7, 11, 16, 26, and 30 have been amended as required by the other changes made to the claims. Support for new claim 36 is found on page 5, lines 7-12. Support for new claims 37-44 is found in original claims 1, 6, 8, 9, 10, 12, 18, and 2, respectively. Support for new claims 45-48 is found in original claims 20, 25, 28, and 29, respectively. It is submitted that no new matter is introduced by these amendments and new claims.

**Rejection under 35 USC 112, second paragraph**

Claims 7-8, 10-11, 16-17, 26-27, 30, and 31 were rejected under 35 USC 112, second paragraph. Claim 1 and claim 20 have each been amended to recite a dihydroxy compound. It is submitted that this rejection has been overcome.

**First Rejection under 35 USC 102(b)**

Claims 1-35 were rejected as anticipated by Yanaka, EP 1 203 660 ("Yanaka-1"). According to the EPO website, US 2002/0102488 A1 is the equivalent of EP 1 203 660.

The Office asserts that the urethane-based addition polymerizable compound disclosed by Yanaka-1 ([0022], [0023], [0026], [0036], and [0037]) "meets the present limitations for the polyurethane polymer." This assertion is respectively traversed.

Yanaka-1 discloses urethane-base[d] addition polymerizable compounds produced using an addition reaction of isocyanate and a hydroxyl group. Specific examples include vinylethane compounds having at least two polymerizable vinyl groups in one molecule obtained by adding  $\text{CH}_2=\text{C}(\text{R}^{01})\text{CO}_2\text{CH}_2\text{CH}(\text{R}^{02})\text{OH}$ , in which  $\text{R}^{01}$  and  $\text{R}^{02}$  are each hydrogen or methyl, to a polyisocyanate compound. See [0022]

Free radical polymerization of the monomers produced by this reaction would produce a polymer in which the main chain of the resulting polymer consists of carbon-carbon bonds formed by free radical polymerization of the acrylate or methacrylate groups. The urethane

groups would be on side chains derived from the side chain -CH<sub>2</sub>CH(R<sup>02</sup>)OH groups.

Independent claims 1 and 20 and new independent claims 37 and 45, the only independent claims in the application, each recite that "the polyurethane polymer comprises urethane linkages in the main chain" and "the polyurethane polymer does not comprise side chain urethane groups." Neither of these limitations is satisfied by these polymers disclosed in Yanaka-1.

Anticipation requires that each and every limitation of the claim be disclosed, either expressly or under principles of inherency, in a single prior art reference. *In re Robertson*, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999); MPEP § 2131. Absence from the reference of any claimed limitation negates anticipation. *Rowe v. Dror*, 42 USPQ2d 1550, 1553 (Fed. Cir. 1997). Therefore, the rejection of claims as anticipated by Yanaka-1 should be withdrawn.

### **Second Rejection under 35 USC 102(b)**

*Claims 1, 3-22, 25-32, 34, 35, and new claim 36*

Claims 1-20 and 23-35 were rejected as anticipated by Yanaka, JP 2002-002135 (Yanaka-2).

Yanaka-2 discloses an original film for lithographic printing that has a heat-sensitive layer containing microcapsules containing a hydrophobic resin. Abstract. The hydrophobic resin may be a polyurethane resin. [0013] and claim 2.

The limitations of claims 2 and 21 have been incorporated into independent claims 1 and 20, respectively, and claims 2 and 21 canceled. These claims now recite that "the polyurethane polymer is prepared by reaction of a diisocyanate and a dihydroxy compound, and the dihydroxy compound comprises about 1-25% of a carboxy functional diol or a mixture of carboxy functional diols." Neither the use of carboxy functional diols to prepare microcapsules nor the use of microcapsules in which the polyurethane polymer contains carboxyl groups is disclosed or suggested by Yanaka-2. Therefore, the rejection of claims as anticipated by Yanaka-2 should be withdrawn.

*New claims 37-44*

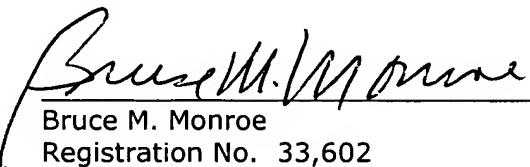
New independent claims 37 and 45 each recite that the "the particles consist essentially of the polyurethane polymer." The microcapsules disclosed by Yanaka-2 also contain heat-light conversion agents ([0033]), polyfunctional monomers ([0043]), and plasticizers ([0045]). Therefore, these particles do not consist essentially of the polyurethane polymer.

The use of microcapsules that consist essentially of a polyurethane polymer is neither disclosed nor suggested by Yanaka-2. It is submitted that new claims 37-44 are patentable over Yanaka-2.

**Conclusion**

It is respectfully submitted that the claims are in condition for immediate allowance and a notice to this effect is earnestly solicited. The Examiner is invited to phone applicants' attorney if it is believed that a telephonic or personal interview would expedite prosecution of the application.

Respectfully submitted,

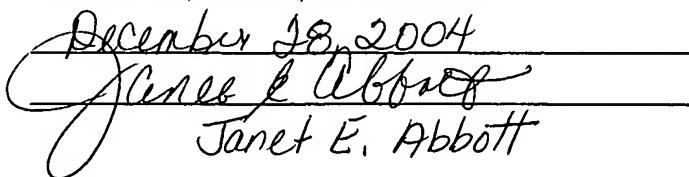
  
Bruce M. Monroe  
Registration No. 33,602

BMM/jea

Dated: December 28, 2004

The Commissioner for Patents is hereby authorized to charge payment to Deposit Account No. 18-0350 of any fees associated with this communication.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on:

  
December 28, 2004  
Janet E. Abbott